

ABSTRACT OF THE DISCLOSURE

An optical information apparatus of the present invention includes:
an optical pick-up head including: a light source; a diffraction unit; a
condensing unit; a beam splitter; a photodetector; and a tracking error signal
5 generator. An optical recording medium has tracks arranged substantially
at a constant pitch. An average of a pitch is t_p . When a main beam is
placed on the track, a first sub-beam and a second sub-beam are placed
between the tracks. The tracking error signal generator performs a
differential arithmetic operation with respect to signals output from a
10 light-receiving portion receiving the main beam to generate a first push-pull
signal, performs a differential arithmetic operation with respect to signals
output from the light-receiving portions receiving the first sub-beam and the
second sub-beam to generate a second push-pull signal, and performs a
differential arithmetic operation with respect to the first push-pull signal and
15 the second push-pull signal to generate a tracking error signal, in a case
where an amplitude of the first push-pull signal obtained at the pitch t_p is
fluctuated when the light beam is scanned in a direction orthogonal to the
tracks of the optical recording medium.